# Product Development Lead (PDL) Training Program

Combined Resources Forum August 28, 2012

Rebecca Derro





# Questions We Should Answer In This Presentation

- What is a PDL?
- Why do we need a PDL Training Program?
- What is offered in the PDL Training Program?
- Where do I find more information?



#### What Is A PDL?

A Product Development Lead is the individual responsible for developing and delivering a mission subsystem that meets technical requirements given cost and schedule restraints (constraints).





## What do PDLs do?

The message is simple - "Only the combined creativity of engineers and scientists working together can develop Missions and instruments for measuring the previously "unmeasured" or "unmeasurable".



PDLs create instruments and missions that rewrite textbooks!



# PDL Training Program Description (1 of 2)

#### Why do we need a PDL Training Program?

- Delivering mission and instrument hardware/software has become increasingly challenging due to the constrained budgets and technical complexity of NASA's science missions.
- The cost, schedule and technical performance responsibility for delivering mission subsystems lies with mid-level engineers who may have the technical experience required but lack the programmatic and team leadership knowledge, skills and tools to deliver within resource constraints.

PDL Training Program will better equip PDLs with the basic knowledge/ tools needed to accomplish their job.



## PDL Training Program Description (2 of 2)

#### What is the program's purpose?

To provide the tools and a disciplined approach in training and preparing knowledgeable, experienced individuals who accept the ownership, responsibility, and accountability for developing and delivering their assigned flight mission subsystems that meet technical requirements within cost and schedule constraints.

This course provides current or newly assigned Product Development Lead (PDL) Engineers with practical application learning activities to emphasize and reinforce key points and challenges from the following PDL concepts/processes:

- Product Development Lifecycle
- Cost Estimating and Tracking
- Configuration Management
- WBS Development
- Anomaly Reporting

- Requirements Management
- Schedule Management
- Risk Management
- Product Plan
- Leadership



# PDL Training Program Architecture

Orientation Workshop	1 Half-Day Session	PDL Orientation	<ul> <li>Expectations, scope, and logistics</li> <li>Panel discussions with Workshop Leads</li> <li>Tools available to PDLs – Wiki and templates</li> </ul>
Core Workshops	2 Half-Day Sessions	Workshop 1: PDL Role Throughout Project Lifecycle	Workshop covers:  • PDL subsystem responsibilities  • PDL deliverables  • Documents overview
	1 Full-Day and 1 Half-Day Sessions	Workshop 2: Getting to Good Requirements/Risk Management	<ul> <li>Workshop covers:</li> <li>Requirements development, flowdown and analysis</li> <li>Allocation, traceability, verification and validation</li> <li>Evaluating a requirement change</li> <li>Risk Management</li> </ul>
	2 Full-Day and 1 Half-Day Sessions	Workshop 3: Schedule Matters	Workshop covers:  • Basic scheduling concepts  • Schedule development, management, and reporting  • Utilizing in-house schedule checklists
	2 Full-Day and 3 Half-Day Sessions	Workshop 4: Cost Estimating and Tracking	Modules: 5.1 Cost by Phase 5.2 Nuts and Bolts – The Basics 5.3 Top 10 Things a Project Wants a PDL To Know 5.4 Earned Value Management – An Introduction for PDLs 5.5 Top 10 Things That Cause Cost Overruns 5.6 Panel Discussion 5.7 Real Life Example
	4 Half-Day Sessions	Workshop 5: Navigating PDL Processes	Modules: 2.1 WBS 2.4 Configuration Management 2.2 Product Plan 2.5 Anomaly Reporting 2.3 Risk Management 2.6 WOAs
	2 Full-Day Sessions	Workshop 6: Leadership for PDL's Sake	Modules: 6.1 Leadership Aspects of Being a PDL 6.2 Leading a Technical Team 6.3 Functional Leadership Skills

Total Class Time: 12.5 days spread over 3 months:

Orientation: 1 half day

For more information, visit http://pdl.gsfc.nasa.gov

Core Workshops: 12 days

# **PDL Training Wiki**

- http://pdl.gsfc.nasa.gov
- Contains all content from training and some interactive features
- All templates, forms, and references available
- PDL Forum





